



**LD Biopharma, Inc.**  
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<http://www.ldbiopharma.com>

## - PRODUCT DATA SHEET -

**Name of Product:** Recombinant Human REG1A Protein  
**Catalog Number:** hRP-1386  
**Manufacturer:** LD Biopharma, Inc.

### Introduction

Human lithostathine-1-alpha (REG1A) gene is a type I subclass member of the Reg gene family. The Reg gene family is a multigene family grouped into four subclasses, types I, II, III and IV, based on the primary structures of the encoded proteins. This gene encodes a protein that is secreted by the exocrine pancreas. It is associated with islet cell regeneration and diabetogenesis and may be involved in pancreatic lithogenesis. Reg family members REG1B, REGL, PAP and this gene are tandemly clustered on chromosome 2p12 and may have arisen from the same ancestral gene by gene duplication. mRNA profiling data indicated that REG1A maintains much high level expression in human fetal brain than adult brain, which regulates neurite outgrowth.

Full-length mature human REG1A (145 aa) gene was constructed with 27 aa N-terminal T7/His/TEV Tag and expressed in E.coli as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

**Gene Symbol:** REG1A  
**Accession Number:** NP\_002900  
**Species:** Human  
**Size:** 50 µg / Vial  
**Composition:** 1.0 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, Sucrose and DTT.  
**Storage:** In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.



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## Key References

Planas,R., et al., *Regenerating gene Ialpha is a biomarker for diagnosis and monitoring of celiac disease: a preliminary study*. Transl Res 158 (3), 140-145 (2011)

Acquatella-Tran Van Ba,I., et al., *Regenerating islet-derived Ialpha (Reg-Ialpha) protein is new neuronal secreted factor that stimulates neurite outgrowth via exostosin Tumor-like 3 (EXTL3) receptor*. J. Biol. Chem. 287 (7), 4726-4739 (2012)

## Applications

1. May be used for in vitro REG1A mediated neurite outgrowth regulation study with this protein as either coating matrix protein or soluble factor.
2. May be used as REG1A protein-protein interaction assay.
3. Soluble / Native protein, which may be used as enzymatic substrate protein for kinase or ubiquitin assay development As enzymatic substrate for various proteases.
4. Potential diagnostic biomarker for both seminoma & celiac disease.
5. As antigen for specific antibody production.

## Quality Control

Purity: > 90% by SDS-PAGE.

## Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHENLYFQGSQEAQTELPQARISCPEGTNAYRSYCYFNEDRETWVD  
ADLYCQNMNSGNLVSVLTQAEGAFVASLIKESGTDDFNVWIGLHDPKKNRRWHWSSGSLVSYKS  
WGIGAPSSVNPGYCVSLTSSTGFQKWKDVPCEDKFSFVCKFKN